

## Diversification Update at 30/09/2012

TOBAM's Diversification Ratio (DR) <sup>1</sup> measures to what extent a portfolio is diversified. The DR <sup>2</sup> (square of the diversification ratio) corresponds to the number of independent degrees of freedom in a particular portfolio – or the number of independent variables at work. As the table shows, the “broad market” indices leave diversification on the table. In addition to a snapshot of each market's DR <sup>2</sup> , the table shows the DR <sup>2</sup> of a well-diversified portfolio, and the fraction of available diversification used by the index.		<i>DR<sup>2</sup> - Index diversification</i>	<i>DR<sup>2</sup> - Maximum diversification</i>	<i>% diversification used by index</i>
		<b>MSCI EMU</b>	1.82	5.19
	<b>MSCI US</b>	2.16	5.75	38%
	<b>MSCI UK</b>	2.12	3.66	58%
	<b>MSCI Japan</b>	2.62	9.06	29%
	<b>MSCI World</b>	2.66	7.29	36%
	<b>MSCI Australia</b>	2.02	4.33	47%
	<b>MSCI Canada</b>	2.79	6.86	41%
	<b>MSCI Emerging<sup>2</sup></b>	3.35	4.79	70%

## Canadian Equities: Diversification and performance

Since its launch in April 2011, the Most Diversified Portfolio for Canadian Equities has provided significant outperformance while reducing volatility, by maximizing diversification:



### AB Canada Equity Strategy

Return	-1.27 %
Annualized return	-0.90 %
Historic volatility	17.88 %
Sharpe ratio	-0.06

### Benchmark

Return	-13.15 %
Annualized return	-9.47 %
Historic volatility	23.66 %
Sharpe ratio	-0.41

### Relative Data

Excess return	11.88 %
Annual excess return	8.57 %
Tracking error	9.30 %
Information ratio	0.99

### Protection in down market:

- Since its inception through the end of 2011, the strategy protected on the downside: the Canadian Equity market returned -19.86%, but the AB Canada strategy protected investors on the downside, improving performance by +7.79%.
- The strategy reduced volatility by 26% for the period.

### Performance in up market:

- For the year to date period through September 30, Canadian Equities rebounded, particularly in the third quarter. The Anti-Benchmark Equity strategy uncovered more diversifying opportunities than the benchmark over this period, returning 12.28% compared to 8.37% for the index, and as a result offered a significant performance advantage, outperforming the MSCI Canada index by +3.91%.
- The Anti-Benchmark Canada strategy also reduced volatility by 21% for the period.

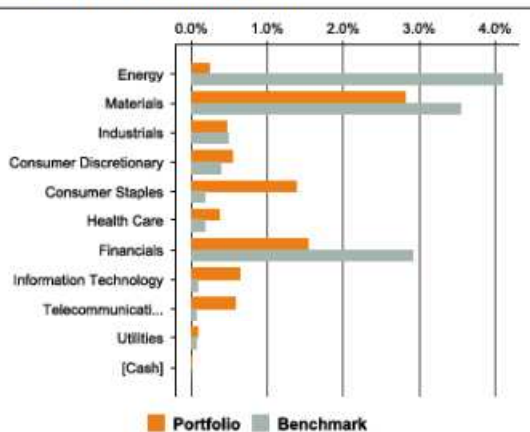
<sup>1</sup>TOBAM's Diversification Ratio measures a portfolio's or index's diversification. It is supported by original research and is based on a mathematical definition of diversification. TOBAM's "Anti-Benchmark" Most Diversified Portfolio<sup>®</sup> maximizes this Diversification Ratio. Maximizing diversification within a universe of securities provides a result closer to the true market risk premium from that universe. "Maximum Diversification<sup>®</sup>" and "MaxDiv<sup>®</sup>" are registered trademarks of TOBAM.

<sup>2</sup> The Anti-Benchmark Emerging Markets Equity strategy filters the reference index to the 200 largest market capitalizations.

## Canadian equities: a concentrated market...

The following graph breaks down the risk contributors for the MSCI Canada index and for the corresponding Anti-Benchmark portfolio. It is clear that the benchmark is highly concentrated in Energy, Materials and Financials, while Anti-Benchmark portfolio exposures are spread more uniformly:

### \* Sources of Volatility (3M)

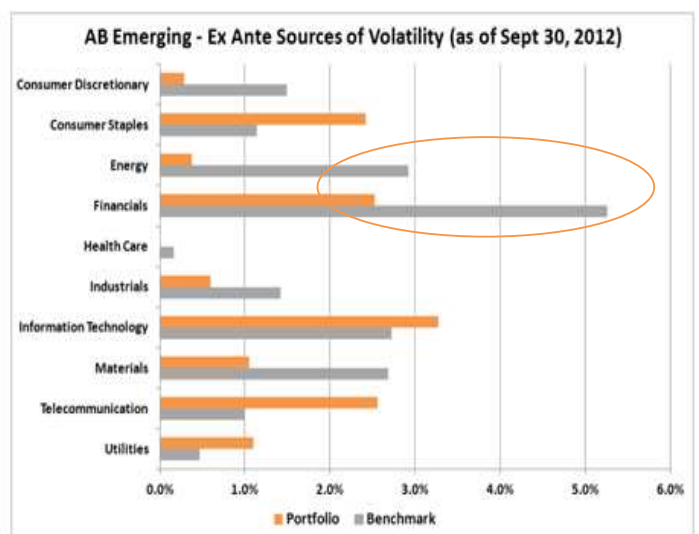
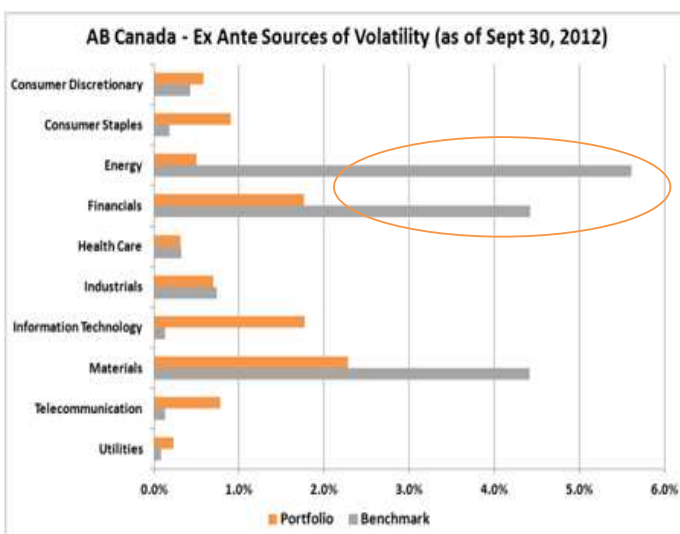


Data as of September 30, 2012

The diversification gap between the MSCI Canada and the AB Canada portfolio thus comes as no surprise. Each portfolio's DR<sup>2</sup>s, corresponding to the number of independent degrees of freedom in the portfolio, indicate that the "broad market" index leaves diversification on the table. The difference between the DR<sup>2</sup> for the AB Canada and for the cap-weighted benchmark is particularly striking: the AB Canada taps into almost three times as much diversification as the benchmark. AB Canada's DR<sup>2</sup> of 6.86 is impressive compared to only 2.79 for the MSCI Canada: the cap-weighted benchmark accesses only 41% of available diversification.

## ...that includes the same risk concentrations as emerging markets:

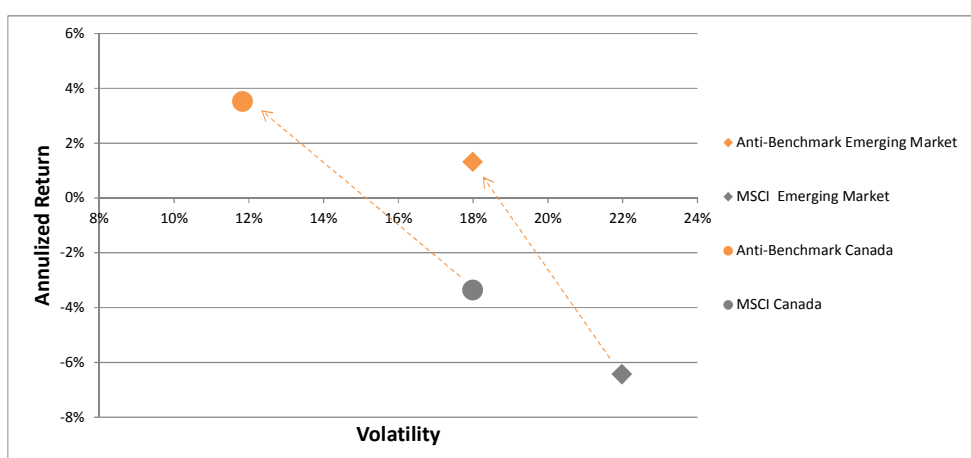
Most investors would not question the benefits of allocating to Emerging Markets for diversification. However, the risk drivers for market cap-weighted Emerging Markets Equities are similar to those for Canadian equities. Both markets are focused on Financials, Energy and Materials:



## Anti-Benchmark: delivering less risk and more return

From June 29, 2011 (inception date of the Anti-Benchmark Emerging Markets strategy) to September 28, 2012, both the Anti-Benchmark Emerging Markets equity and Canada equity strategies significantly reduced risk and improved returns vs. their respective market cap-weighted MSCI benchmarks:

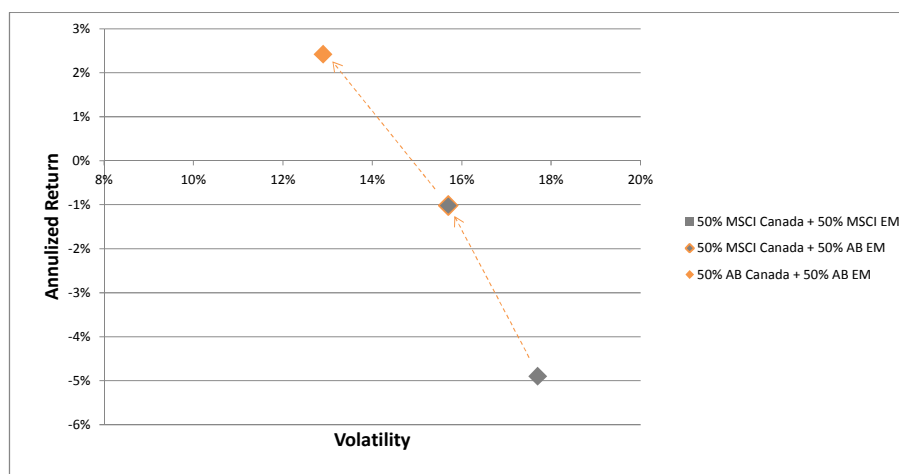
USD 06/29/2011 - 09/28/2012	MSCI Emerging Market	Anti-Benchmark Emerging Market	MSCI Canada	Anti-Benchmark Canada
<b>Annualized return</b>	-6,4%	1,3%	-3,4%	3,5%
<b>Volatility</b>	22,0%	18,0%	18,0%	11,8%



## Anti-Benchmark: diversified and diversifying

Combining Anti-Benchmark strategies with MSCI index strategies can also be beneficial. The following table compares the effects of combining a Canadian equities portfolio invested passively (MSCI index) with an allocation to emerging markets equities, either via the MSCI EM index or the Anti-Benchmark EM. For illustration purposes, a combination of both AB Canada and AB EM equity strategies is included:

USD 06/29/2011 - 09/28/2012	50% MSCI Canada + 50% MSCI EM	50% MSCI Canada + 50% AB EM	50% AB Canada + 50% AB EM
<b>Annualized return</b>	-4,9%	-1,0%	2,4%
<b>Volatility</b>	17,7%	15,7%	12,9%



## For more information

TOBAM is an asset management company offering innovative investment capabilities whose aim is to maximize diversification. TOBAM's flagship Anti-Benchmark® strategies, supported by original research and a mathematical definition of diversification, provide clients with diversified core equity exposure, both globally and in domestic markets. FTSE also publishes the FTSE TOBAM Maximum Diversification Index Series based on the Anti-Benchmark equity portfolio construction methodology. The company manages over \$2.6 billion via its Anti-Benchmark strategies for institutional clients worldwide. Its team includes seventeen financial professionals.

## Contacts:

### Head of Business Development

Christophe Roehri  
+33 1 53 23 41 60  
[Christophe.Roehri@tobam.fr](mailto:Christophe.Roehri@tobam.fr)

### Business Development

Laura Vu Thien  
+33 1 53 23 41 65  
[Laura.VuThien@tobam.fr](mailto:Laura.VuThien@tobam.fr)

### Client Service

Elizabeth Breaden  
+33 1 53 23 41 56  
[ClientService@tobam.fr](mailto:ClientService@tobam.fr)

### TOBAM Marketing Partners

#### Global Distribution - Amundi

Astrid Gambihler  
+33 1 76 37 85 35  
[astrid.gambihler@amundi.com](mailto:astrid.gambihler@amundi.com)

#### Nordics - Paxstone Capital LLP

Kasper Kemp Hansen  
+45 36 95 97 00  
[kasper.hansen@paxstone.com](mailto:kasper.hansen@paxstone.com)

#### Canada - Investeam

Nancy Nightingale  
+1 416 860 9490  
[nancy.nightingale@investeam.ca](mailto:nancy.nightingale@investeam.ca)

#### Australia & NZ - Phoenix Capital Advisory Ltd.

Mark Jackson [mark.jackson@phoenixcap.com.au](mailto:mark.jackson@phoenixcap.com.au)  
Matthew Wormald [matt.wormald@phoenixcap.com.au](mailto:matt.wormald@phoenixcap.com.au)  
+612 8705 5473

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